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ABSTRACT

The paper addresses three questions: (1) What are the most successful techniques for measuring the effects of early childhood development (ECD) programs? (2) What are likely trends of future evaluations? and (3) How can future trends take into account recent research in developmental psychology? Predictions are made on the basis of trends in ECD programs and evaluation, and advances in developmental psychology. Table 1 lists a dozen trends in early childhood education programs which have emerged in the last quarter of the 20th century, while Table 7 envisions characteristics of evaluation in the year 2010. The discussion of trends in evaluation research, which is supplemented with illustrative data tables, cites four exemplars of different types of research, each of which is a prototype of design. It is maintained that research will vary in scale and be increasingly experimental and rigorous in design. Large scale designs will employ increasingly sensitive measures and follow up greater amounts of time. A section of the paper which outlines trends in developmental psychology notes dissatisfaction with Piagetian theory, itemizes the legacy of Piaget, and asserts that more must be known about the relationship between the child's intellect, emotions, and social world. An illustration of a transactional theory of development is given which serves to indicate the ways in which ECD programs can change children's thoughts and feelings through a cycle of causes and effects. (RH)

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MONITORING AND EVALUATING EARLY EDUCATION PROGRAMMES

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* What are our most successful techniques for measuring the effects of ECD programmes?

* What are the likely trends in future evaluations?

* How can future trends take into account recent research in developmental psychology?

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MONITORING AND EVALUATING EARLY EDUCATION PROGRAMMES

Introduction. A prediction

As the century draws to a close we think towards future programmes for children and wonder how successful new efforts will be at promoting healthy development, even happiness, in tomorrow's children. To help concentrate our minds on evaluations in the next century, let's imagine a conference held in Hong Kong in the year 2020. The theme of the conference might be "Educating and Caring for Children 0-6" and there will be a symposium on "Recent evaluation studies of ECD". Papers presented at this symposium will describe evaluation research carried out in the decade between 2010 and 2020. There will, no doubt, be heated discussion on the findings and methods used in the evaluations. Can we predict the themes of the future conference? Will there be radically new programmes? Research techniques which surprise us?

Before looking at future evaluations in more detail, let's look at the reasons behind all evaluation studies.

Why evaluate?

a. To improve quality

b. To improve efficiency

c. To justify allocation of funds

d. (perhaps) to compete for scarce resources

Although reason (a) lay behind most evaluations of the 60's, reason (b), was the driving force behind evaluations in the 70's. Reason (c), has become the watchword of the 80's, and I'm afraid that the year 2020 will see many studies carried out in order to substantiate reason (d). I expect them to show that money spent during the early lives of children saves money later on. But more on this later....

On what basis do we make predictions about the future? I shall consider three separate knowledge bases to guide our "informed guesses": (1) current trends in ECD programmes, (2) recent trends in evaluation, and (3) recent advances in developmental psychology. The last is particularly important because all too often evaluation studies are marred by outcome instruments which are out of date. For example, evaluation studies continued to use I.Q. tests as an "outcome measure" long after psychologists abandoned them for being focused too narrowly on static knowledge rather than dynamic problem solving.

Knowledge-bases useful in making predictions about future evaluation studies.

1. Trends in ECD programmes: E.g.
   Early childhood education 3-6 years

2. Trends in evaluation techniques

3. New directions in Child development theory and research (Psychology)

1. Recent trends in ECD programmes

Some programme trends in the last quarter of the 20th century are summarised in Table 1. They will guide us in considering the shape of evaluations in the 21st century.

Table 1

Trends in early childhood education programmes

which have emerged in the last decade

* more emphasis on developmental curriculum - not on formal skills
* more involvement of families
* part of the community, whether home-based or centre-based
* linked to other services, e.g. Health
* special focus on children most in need, e.g. the poor/disabled/isolated/homeless
* extension to aspects of care, family support; rejection of narrow educational aims
* Many models: no one is the 'right solution' to local or national needs
* both small scale and large scale programmes
* Diverse tiers of training, including professional, and para-professional
* increased emphasis on in-service training and support
* moral education ("man living with man") is just beginning to be explored
* articulate values bases are being prepared

Note that last two trends are just beginning to appear

2. Recent Trends in evaluation research

I'll not dwell on issues of statistical tests or of high-powered designs, but I'll deal with the scale of research. In the past, studies on a large scale have employed a limited set of outcome measures. "Did the programme work?" This question is answered in terms of just a few measures: for example, was school entry increased by preschool programmes? Smaller scale studies have been able to employ many more measures of outcome, such as monitoring change of attitudes in parents or children. Both small and large scale studies will proliferate in the future, with large scale designs employing more sensitive measures and allowing longer term follow-up.

Some studies are correlational in nature, some are experimental, i.e. they have random assignment to programmes. It is this last kind which are the most robust because they allow us to make casual statements. These will be more experimental studies in the future, and more rigorous designs in general.

I'll mention four exemplars of different types of research, each a 'prototype' of design.

2.1. The Indian Intergrated Child Development Service (I.C.D.S.) evaluation studies of the anganwadi (literally "courtyard") programme. Hong (1989) summarises research which shows that, when compared with children who did not participate in I.C.D.S. programme, anganwadi children were more likely to enter school, to have better attendance records, and also to show higher academic performance.

2.2. The Consortium for Longitudinal Studies (1982): a meta-analysis of eleven high quality U.S.A. preschool programmes. They make new ground in

Outcomes.

E.g. 'real world success' of jobs, school completion, financial self sufficiency. A major change in children's goals, including their job aspirations. Change in parents' view of their children (see paper by I. Lazar in these Proceedings)

2.3. Schweinhart, Weikart & Larner (1986): study of longitudinal effects of 3 different U.S.A. preschool

programmes. The Distar programme is skills based and form, the High/Scope and Nursery programmes are based on play and children's own initiations.

Outcomes: Community outcomes, rather than educational ones, were affected by preschool attendance, e.g. less delinquency amongst preschool 'graduates'
Programme children more likely to engage in sports/hobbies, to read books. Preschool attendance led children to view themselves as more approved by their parents.

see Tables 2, 3 and 4

2.4 Sylva and Jowett (1986): short-term effects of 2 (U.K.) preschool programmes, one staffed by professionals and one by paraprofessionals. This was an observational study to assess behavioural outcomes.

E.g. children's behavioural independence in the classroom at school, greater learning orientation.

Tables 5 and 6 show that children from programmes with professionally trained staff were more independent and more learning-oriented.

3. Recent advances in developmental psychology

The goal in this section is to examine developmental theory and research in terms of its implications for evaluating and monitoring ECD programmes. Which theories should guide the design of evaluation research? An outline of trends in developmental psychology follows.

3.1. There is dissatisfaction with Piagetian theory as the sole authority; it is not sensitive enough to the 'local task' and how it helps or hinders problem-solving. (See especially Donaldson, 1987).

It does not take account of social environment or culture; the work of Vygotsky is stronger on this score because of his insistence on cultural 'instruments' for thought such as language, algorithms, or myths.

3.2. What is the legacy of Piaget? There is widespread agreement with his view that:

a) intelligence is adaptive, problem-solving; it is not static knowledge

b) the child constructs mental models of the world; these models are different from those of adults in both structure as well as detail.

c) the child learns by active exploration of the environment - not by passive reception of facts or drill is specific skills.

d) There are three broad continua of intellectual development

a) thinking procedes from the concrete to the abstract

b) thinking begins as single channel activity, then progresses towards multi-channel activity

c) at first thinking is imprisoned in the here and now; gradually it is freed to contemplate the past, future, and the hypoethetical.

3.3. If Piaget contributes only part of what we need to know about children, where is the cutting edge in today's developmental psychology?

WE NEED TO KNOW MORE ABOUT THE RELATIONSHIP BETWEEN THE CHILD'S INTELLECT, HIS EMOTIONS AND THE SOCIAL WORLD IN WHICH HE GROWS UP.

This requires a Transactional theory of development, as described by Lazar in these Proceedings.

What matters in child development is more than the acquisition of knowledge concerning colours/ letters/major rivers of the world. I suggest that what matters in children's development is their feeling of competence and sense of hope. But how can an ECD programme instill these? How does the "outside world" of ECD programmes change the "inside world" of the child's thought and feeling? It can do so by a cycle of causes and effects.

3.4 I turn to the work of Carol Dweck (1988) on how children acquire beliefs and attitudes relating to their own talents and skills. Her views are supported by a large body of experimental work on children. Briefly:

a) Children tend to show either helpless or mastery patterns of behaviour when confronted with obstacles

Helpless children avoid challenge and give up whereas 'mastery oriented' children persist in the face of obstacles; mastery orientated children seek new, challenging experiences

'Helpless' children report negative feelings and views of themselves when they meet obstacles, whereas 'mastery' children have positive views of their competence. This makes them more task oriented and resilient when they encounter difficulties

The style of 'helpless' or 'mastery' oriented behaviour is not related to intelligence in the early years, but is a personality characteristic, a way of viewing oneself and one's capacity to be

effective.

b) Helplessness is related to differences in children's goals. Helpless children pursue goals of getting rewards from adults whereas Mastery oriented children pursue goals of learning and discovery.

The two goals may be dichotomised as Performing well v. Learning something. Because they are oriented to learning and skill acquisition, Mastery children do not feel failure when things go wrong. Instead they concentrate on the task at hand. Helpless children are erractic in strategy when the going gets tough and they engage in self-recrimination.

Helpless children pursue goals of approval from others. Failure or difficulties at a task send them into negative mood because they anticipate disapproval from adults. Mastery children care less about adult approval and fear failure less.

c) Mastery/Helplessness is also related to child's view of relationships between efforts and achievement. Mastery children believe that effort pays off with the acquisition of new skill; Helpless children avoid effort because they think it will get them nowhere.

d) Children with approval goals view effort as useless... they see success/failure as inherent in the child (Elitist view; see Lazar's paper). Thus an essential difference between the two kinds of children is the fixed or incremental view of intelligence and competence. Helpless children believe that intelligence is fixed; Mastery oriented children believe that intelligence is incremental, that they can learn by persistance and flexibility. The former appear to inhibit a fixed world, the latter live in a changing world where effort is rewarded.

To conclude this paper, I've argued that Piagetian theory is not dead, although it is too narrow. There is a need to broaden the developmental theory that guides both programmes and evaluation. Children develop inside cultures and this affects their thinking. (See Vygotsky). Children also acquire attitudes towards their own talents, they develop goals which are oriented towards approval or to mastery, and this affects their persistance.

ECD programmes must aim higher than instilling a few facts or rudimentary skills. They should be explicit about how they can:

instill in the child a positive belief in his own skill

encourage an orientation toward learning-oriented rather than performance-oriented activity.

help the child acquire resources for dealing with stress and failure

After reviewing the literature on early intervention Michael Rutter (1985) concluded that ECD programmes affect 'not specific skills but attitudes towards self and towards school'. I agree wholeheartedly with Rutter.

Because ECD programmes affect much more beside formal academic skills, their evaluation must be broad as well. (OF COURSE EVALUATION MUST ALWAYS BE CULTURE SENSITIVE). I believe that the techniques of evaluation research in 1920 will most likely be the ones summarised in Table 7.

These techniques will document the effect of ECD programmes (especially those with a strong educational component) on many aspects of child development - not just those which are narrowly skills based.

Mean Number Delinquent Acts Reported at Age 15 by Curriculum Groups

Table 2

	Distar	H/S	Nursery	p
Delinquency scale, 18 items	12.83	5.44	6.94	.04
Personal violence subscale	2.28	0.88	1.17	-
Property damage subscale	1.72	.28	.39	.04
Stealing subscale	3.06	1.72	2.22	-
Drug abuse subscale	3.17	1.06	1.89	.06
Status offenses subscale	3.04	1.56	1.22	.04

Table 3

	Distar	H/S	Nursery	p
Participate in sports: Interview questions				
Often	17%	50%	44%	.02
Sometimes	28%	44%	28%	
Never	56%	6%	28%	
In recent weeks have read:				
A book (N = 49)	31%	69%	59%	.09
A newspaper	67%	89%	72%	
A magazine (N = 53)	44%	41%	72%	-

From Schweinhart et al. (1986)

Table 4

	Distar	H/S	Nursery	p
Getting along with family: Interview questions				
Great	33%	33%	28%	-
Fair	44%	67%	56%	
Poorly	22%	0%	17%	
Family feel about how you're doing:				
Great	0%	6%	6%	.03
All right	67%	94%	89%	
Poorly	33%	0%	6%	

From Schweinhart et al (1986)

Table 5

Reactions To Difficulty
(% of all children's responses)

	Asks for Assistance *	Gives Up *	Persists on own *
Nursery (professional staff)	17	1	82
	p<.05	p<.01	p<.05
playgroup (untrained staff)	36	22	42

* p<.05

From Jowett and Sylva 'Does kind of preschool matter?' Educational Research, Vol.1, p. 21-23, 1986

Table 6

Types of Language Initiation to Adults (% of all initiations)

	% Request for help or Admin.	% Social/ Positive	% Learning Oriented
Nursery N=118 Professional, Trained staff	32	48	20
	p<.05	p<.05	p<. 1
Playgroup N= 98 Untrained staff	7	19	14

From Jowett, S. and Sylva, K. (1986)

Table 7

EVALUATION "OUTCOMES" IN THE YEAR 2010 *

1.	Uptake & coverage will be measured with care, using stratified samples or whole populations
2.	Fewer I.Q. measures will be used but measures of educational attainment will still be in use
3.	Schooling data will be collected as "outcome" of ECD programme E.g. * entry to school * attendance patterns * completion of schooling
4.	"Real-world" functioning will be measured How has participation in a programme affected cost benefit analysis JOBS? PARENTHOOD? CRIMINAL BEHAVIOUR? COMMUNITY PARTICIPATION?
5.	Measures of social/community behaviour will be made Child's cooperation/aggression with others child's attitudes towards peers/family/community
6.	Measures of children's "character/personality" will be made. E.g. learning orientation self reliance seeking challenge? resistant to obstacles? self esteem of child
7.	Family views on the child will be assessed including Feeling of self-efficacy in parents, family role in education. (More fathers will be studied).
8.	Measures of child's attitudes/behaviour in relation to the physical environment. Does ECD programme create more ecological knowledge/behaviour?
9.	Measure of child's values/goals
10.	There will most likely be new MEASURES OF THE EDUCATION/CARE SETTING, these will take the environment as the unit of analysis, and not the child.

* All will be COST - EFFECTIVE

* All measures will be VALID/RELIABLE/CULTURALLY APPROPRIATE

* All will be DESIGNED WITH ARTICULATED VALUES IN MIND

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